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March 25, 2002

William F. Caton,  
Acting Secretary  
Federal Communications Commission  
445 Twelfth Street, S.W.  
Washington, D.C. 20554

Re: *Ex Parte* Presentation in ET Docket 98-42



Dear Mr. Caton:

BOSTON  
DALLAS  
DELAWARE  
NEW YORK  
SAN DIEGO  
SILICON VALLEY  
TWIN CITIES  
WASHINGTON, DC

On Friday, March 22, 2002, Mr. Kent Kipling, of Fusion Lighting, Inc. and I met with Bryan Tramont, Senior Legal Advisor to Commissioner Abernathy. The purpose of the meeting was to discuss Fusion's position with respect to out-of-band emissions proposals by Sirius Satellite Radio and XM Radio in the above-referenced proceeding. At the meeting, Mr. Kipling distributed the attached handout describing the history of Fusion Lighting, the various out-of-band emission's proposals, tests of DARS receivers performed by Fusion, and Fusion's request for a safe harbor. Subsequently, I sent Mr. Tramont an e-mail providing the legal precedent for providing a safe harbor. A copy of this e-mail is also attached.

Please contact me if you have any questions.

Very truly yours,

Robert J. Ungar  
Counsel to Fusion Lighting, Inc.

Enclosure

RJU/tmh

cc. Carl R. Frank  
Bruce D. Jacobs

# Fusion Lighting's Sulfur Lamp

- Highly efficient
- Highly acclaimed
  - 1995 R@D 100 award
  - 1995 Popular Science - Best of what's new
  - 1998 Light Fair - Innovation award
  - 2001 Smithsonian - Lighting exhibit
- Broadly supported
  - Private \$40M+, DOE \$6M+, NASA, EPA



March 2002

FCC Meeting

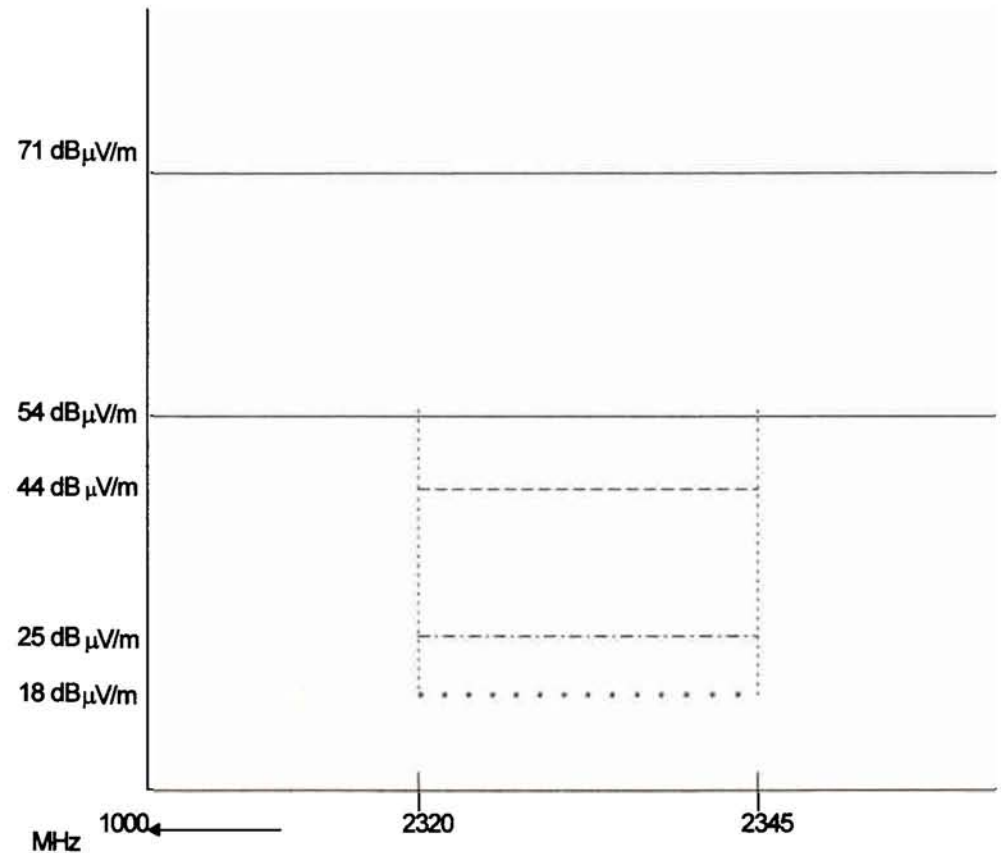


# History

- Fusion directed to the 2.45 GHz ISM band by the FCC in the 1970s
  - Basis of UV curing business
  - Basis of semiconductor equipment business
- Sulfur lamp FCC tested and approved 1996
- Initial lamp sales 1996

# Proposed out-of-band limits

- Current limit 71dB $\mu$ V/M @ 3M Avg.
- FCC proposal 54dB $\mu$ V/M @ 3M Avg.
  - 85% reduction from current limit
- Fusion proposal 44dB $\mu$ V/M @ 3M Avg.
  - 95% reduction from current limit
  - Safe Harbor
- DARS demand 25dB $\mu$ V/M @ 3M
  - 99.9% reduction from current limit
- Sirius petition 18.7dB $\mu$ V/M @ 3M



March 2002

FCC Meeting



# Fusion Lighting Testing of DARS Receivers

- XM Satellite Radio
  - No interference from Fusion lamp at 3 meters
    - (Lamp emission 51 dB $\mu$ V/M @3 meters)
- Sirius Satellite Radio
  - No interference from Fusion lamp at 5 meters
    - (Lamp emission 51 dB $\mu$ V/M @3 meters)

# Tentative Fusion Proposal

- In-band limits compatible with practical magnetron driven lamps
- “Safe Harbor” guarantee for out-of-band emissions

## Tracy Haynes

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**From:** Robert J. Ungar  
**Sent:** Monday, March 25, 2002 8:02 AM  
**To:** Tracy Haynes  
**Subject:** FW: Safe Harbor

This is the 2d attachment for the ex parte letter on the meeting with Bryan Tramont.

-----Original Message-----

**From:** Robert J. Ungar  
**Sent:** Friday, March 22, 2002 4:11 PM  
**To:** 'btramont@fcc.gov'  
**Cc:** Terry Mahn  
**Subject:** Safe Harbor

As promised I'm sending the cite for the FCC safe harbor precedent - 10 FCC Rcd 4695.

This was the approach used by the Commission to accommodate both LMS systems and Amateur and Part 15 devices in PR Docket 93-61. Addressing the secondary status of Amateur and Part 15 operations, the Commission explained, "...we are adopting rules that define and clarify what constitutes harmful interference from their secondary operations. Harmful interference is defined as '(a)ny emission, radiation or induction that endangers the functioning of a radio navigation service or of other safety services or seriously degrades, obstructs or repeatedly interrupts a radiocommunication service operating in accordance with this chapter. To promote cooperative use of the 902-928 MHz band we are elaborating on this standard to define what is *not* harmful interference for both Amateur operations and *unlicensed Part 15 devices* to multilateration LMS systems. The 'negative definition' will promote effective use of the 902-928 MHz band by the various services by clearly establishing the parameters under which licensed Amateurs and unlicensed users of Part 15 devices may operate without risk of being considered sources of harmful interference to services with a higher allocation status. Part 15 and amateur operators who voluntarily operate within the following parameters will not be subject to harmful interference complaints from multilateration LMS systems at 902-928 MHz." at Para. 36

I hope this is useful.